MATTERS ARISING

Small spectrum of prevalent gonococcal auxotype/serovar classes in Africa

The article of C A Ison and colleagues[1] has prompted us to report on the epidemiological analysis of *Neisseria gonorrhoeae* strains isolated in Kenya which also showed a high level of antibiotics resistance and belonged to a restricted number of serovars.

N gonorrhoeae were isolated from the urethra of 100 male STD patients in Kenya in April 1984. Sixty two percent of the strains were penicillinase producing *N gonorrhoeae* (PPNG) and an additional 10% showed chromosomaly mediated resistance (CMRNG) compared with 49% (81/165) PPNG and 27% (44/165) CMRNG found in the Gambia by Ison *et al.*[1] We also found resistance to tetracycline ($\geq 1 \mu g/ml$) to be high (78%) and 32% had a minimal inhibitory concentration (MIC) of ≥ 4 $\mu g/ml$. 58% of gonococcal strains were resistant to both penicillin and tetracycline. We also did not encounter any high level plasmid-mediated tetracycline resistance (MIC ≥ 16 $\mu g/ml$).

N gonorrhoeae strains from Kenya also belonged to a small number of auxotype/serovar (A/S) classes (25). However, in our study 3 A/S classes predominated (NR/IA-4, Pro/IB-1, NR/IA-6) accounting for 60% of all strains unlike in The Gambia where 52% (86/165) belonged to Proto/IB-7. The A/S classes NR/IA-4 and Pro/IB-1, comprising 24% and 23% respectively, dominated our gonococcal population. Other A/S classes were represented by only 6 or less isolates (Figure). PPNG strains belonged more often to A/S class NR/IA-4 than to other A/S classes ($p \leq 0{\cdot}05$).

The high prevalence of penicillin resistance found in this study is one of the highest rates registered in an African country.[2-4] Serogroup PIA and serovar IA-4 has been associated with penicillinase production also in other African countries.[5-7] Only three A/S classes dominated the gonococcal population in Nairobi with one A/S class associated with penicillinase production. Even in longitudinal studies only 4 dominating A/S classes were detected in Nairobi.[3 7 8] In the same year 27 different A/S classes were identified from 56 strains isolated at the Department of Dermatology in Heidelberg, Germany with no A/S class dominating the population. NR/IA-4 isolates accounted for only 0·8% (3/360) and Pro/IB-1 isolates for 4·4% (16/360) of the total population in Heidelberg between 1981–89.[9]

Our data support the findings of Ison and colleagues about relatively homogeneous gonococcal populations with a low number of A/S classes in Africa. Within this gonococcal populations a cluster of antibiotic resistant strains predominates. The difference of gonococcal populations between Europe and Africa may to be the result of different selective pressures on serovar prevalence.

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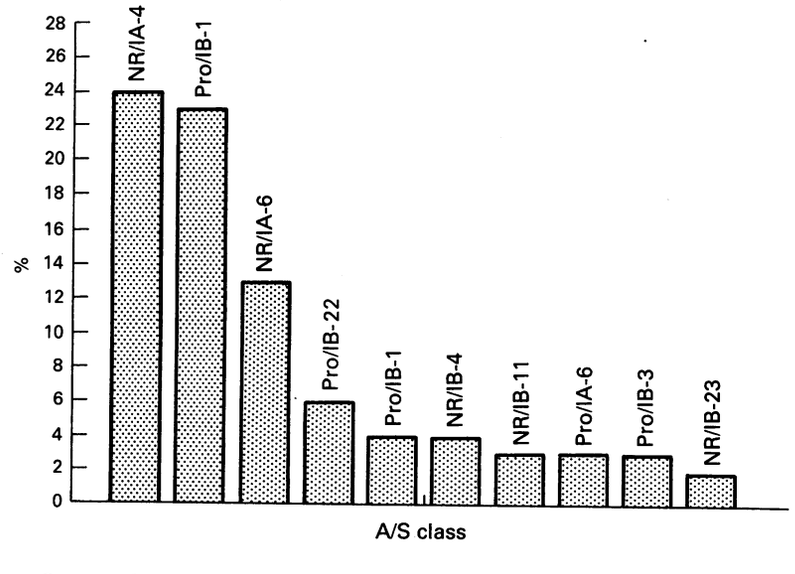

Figure Gonococcal population dominated by three auxotype/serovar classes.

BOOK REVIEWS

Gastrointestinal & Nutritional Manifestations of the Acquired Immunodeficiency Syndrome. Edited by Donald Kotler. New York, Raven Press. (US $118, pp 310) 1993. ISBN 0-88167-780-9.

This concise volume is clearly written and provides a remarkably comprehensive account of its chosen subject. The contributions come from Dr Kotler's own service at St Luke's-Roosevelt Hospital Center in New York, other units in the USA and Canada, and from the Claude Bernard Hospital in Paris, France.

An initial chapter summaries the basic biology of HIV infection and subsequent chapters give overviews of the gut-associated immune system and the link between nutrition and immunity. There then follows a major section on the various clinical manifestations of AIDS. These provide a sound discussion of intestinal and hepatobiliary infections and tumours with an essentially clinical approach but including some useful and relevant theoretical background. Separate chapters are devoted to pathology and radiology which admirably succeed in showing how important an integrated multidisciplinary approach is in managing AIDS patients.

Perhaps the most significant part of the book is the section on wasting disease—an area where the editor has made a notable contribution. Parallels are drawn of the metabolic effects of cancer, starvation, malnutrition and AIDS. Death occurs in all these conditions when subjects reach approximately 60% of ideal body weight. Thus if the mechanisms underlying wasting in AIDS patients could be determined, and overcome, there could be a worthwhile increase in their survival. In this respect there is an extensive discussion of the role of cytokines, and in particular tumour necrosis factor (TNF, cachetin), which may prove to be important in HIV progression. Studies are discordant and there is as yet no consensus as to the importance of TNF, but results of recently proposed studies of immunomodulatory therapy are eagerly awaited.

What is the role of feeding in HIV disease? Unfortunately, alimentation or hyperalimentation does not always work and may at times even be dangerous. Dr Kotler and colleagues describe nutritional status assessment and the role and appropriate use in AIDS of enteral and parenteral nutritional support. Dietary advice and psychological aspects are also covered and there is a final chapter on infection control.

I have only a few criticisms. In the first

chapter, table 2 lists the major infectious agents in AIDS patients. Salmonella, shigella and campylobactor are singled out as having altered pathogenicity despite this being almost certainly true of many of the other organisms listed in the table—for example *Treponema pallidum*. In chapter 4, describing oral complications, no mention is made of thalidomide in treating refractory aphthous ulceration. Although the latter drug is not available for this indication in the United States, this is an example of authors on the other side of the Atlantic yet again omitting to cite UK or European experience. Finally, as always, books on HIV infection and AIDS begin to date quickly. For example there is now a reliable method of detecting microsporidia in the stool and not just via duodenal biopsies. However, this can hardly be said to be a valid criticism as references are extensive and up to the date of publication.

Overall, this is a well produced book with numerous and excellent black and white illustrations and photomicrographs. It should be accessible to all who look after patients with HIV disease.

D A HAWKINS

Immunology of HIV infection. Edited by A G Bird. *Immunology and medicine series vol. 17.* Dordrecht, Kluwer Academic Publishers 1992. (pp 180. £40). ISBN 0-7923-8962-X.

This volume is the seventeenth in the *Immunology and Medicine* series, designed to present individual topics in immunology to clinicians and pathologists in a condensed package of readily assimilable information. The chapter authors are drawn from the UK and the Netherlands and are recognised experts in HIV research. The chapters review the natural history of HIV infection, lymphocyte functional defects, antigen presentation, cytotoxic T cell responses and monitoring disease progression. Almost all of the information relates to the epidemic strain HIV-1; discussion of HIV-2 which is endemic to equatorial West Africa, and the genetically related Simian Immunodeficiency Virus (SIV) family is principally in relation to vaccine development in the SIV-infected macaque as an animal model of AIDS. A review of the viral life cycle is included in discussion of HIV variability in the pathogenesis of AIDS, which indicates the enormous genomic diversity and biological heterogeneity within populations of virus. This is accompanied by a relatively short review of the B lymphocyte response to HIV infection. Since current candidate vaccines based on purified viral envelope proteins are intended to elicit antibodies against HIV, the capacity of antibodies to neutralise diverse HIV isolates is a crucial question. There is a detailed critique of the use and limitations of CD4 + lymphocyte counts to assess progression of HIV infection, which is particularly welcome in the light of recent clinical antiviral trials which have cast doubt on the validity of CD4 + counts as surrogate end-points compared with clinical end-points. The text maintains a firm clinical emphasis with a high standard of clarity and brevity throughout, with clear illustrations and excellent references at the end of each chapter. As a concise authoritative review, this volume admirably fulfills the aims of the series.

AJ CARMICHAEL

NOTICE

Medical Screening: The Way Forward

Medical Screening provides many opportunities for the prevention of disease and handicap. What can it offer and what are its limitations? Based on several case studies, *Medical Screening: The Way Forward*, organised jointly by *BMJ* and *Journal of Medical Screening* is a one day conference to be held on 26 January 1994 at the QE2 Conference Centre, London; to examine the medical, scientific, ethical, social, psychological and economic aspects of screening.

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